In the Claims

The following is a complete listing of the claims and replace all prior claims in the application:

- 1 (Currently Amended) A controller, comprising a processor for controlling a
- write operation and for receiving a thermal signal from a read channel, wherein the processor
- 3 compares the thermal signal to a predetermined threshold to determine whether to initiate a
- 4 re-write operation, wherein the thermal signal is a bandpass filtered signal that is tuned to the
- 5 air bearing resonant frequencies associated with a predetermined drive design.
 - 2. (Canceled)

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- The controller of claim 1 wherein the processor initiates the re-write operation
- when the thermal signal exceeds the predetermined threshold.
- 1 4. The controller of claim 3 wherein the thermal signal indicates a flying height
- 2 variation for a transducer.
- The controller of claim 4 wherein the thermal signal exceeding the
- 2 predetermined threshold indicates a flying height variation that will cause the higher
- 3 frequency components in a signal written to media to become attenuated resulting in
- 4 unrecoverable errors when reading the written signal.

- 1 6. The controller of claim 3 wherein the thermal signal exceeding the
- 2 predetermined threshold indicates a flying height variation that will cause the higher
- 3 frequency components in a signal written to media to become attenuated resulting in
- 4 unrecoverable errors when reading the written signal.
- The controller of claim 1 wherein the thermal signal indicates a flying height
- 2 variation for a transducer.
- 1 8. The controller of claim 1 wherein the processor initiates a write reassign when
- 2 a thermal signal exceeding the predetermined threshold is detected during the rewrite.
- 1 9. The controller of claim 1 wherein the processor initiates a read/verify after the
- 2 rewrite.
- 1 10. (Currently Amended) A disk drive, comprising:
- a processor for controlling reading and writing of data on a data recording medium;
- a write channel for processing write signals for recording on the data recording
- 4 medium; and
- a read channel for reading data from the data recording medium and for providing a
- 6 thermal signal representing flying height variation;
- 7 wherein the processor compares the thermal signal to a predetermined threshold to
- determine whether to initiate a re-write operation, and wherein the thermal signal is a
- 9 bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with a
- 10 predetermined drive design.

11. (Canceled)

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| 1 | 12. | The disk drive of claim 10 wherein the processor initiates the re-write |
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| 2 | operation whe | n the thermal signal exceeds the predetermined threshold. |

- 1 13. The disk drive of claim 12 wherein the thermal signal indicates a flying height variation for a transducer.
- 1 14. The disk drive of claim 13 wherein the thermal signal exceeding the 2 predetermined threshold indicates a flying height variation that will cause the higher 3 frequency components in a signal written to media to become attenuated resulting in

unrecoverable errors when reading the written signal.

unrecoverable errors when reading the written signal.

- 1 15. The disk drive of claim 12 wherein the thermal signal exceeding the 2 predetermined threshold indicates a flying height variation that will cause the higher 3 frequency components in a signal written to media to become attenuated resulting in
- 1 16. The disk drive of claim 10 wherein the thermal signal indicates a flying height variation for a transducer.
- 1 17. The disk drive of claim 10 wherein the processor initiates a write reassign 2 when a thermal signal exceeding the predetermined threshold is detected during the rewrite.

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the rewrite. 2 19. (Currently Amended) A method for predicting write failure resulting from 1 flying height modulation, comprising: 2 initiating a write operation for writing data to a recording medium; 3 monitoring a read channel during the write operation; 4 comparing a thermal signal from the read channel to a predetermined threshold; and 5 re-writing the data if the thermal signal exceeds the predetermined threshold; and 6 bandpass filtering the thermal signal such that the bandpass filtered signal is tuned to 7 the air bearing resonant frequencies associated with a predetermined drive design. 8 20. (Canceled) 1 1 21. The method of claim 19 wherein the thermal signal indicates a flying height variation for a transducer. 2 22. The method of claim 21 wherein the thermal signal exceeding the 1 predetermined threshold indicates a flying height variation that will cause the higher 2 frequency components in a signal written to the medium to become attenuated resulting in 3 unrecoverable errors when reading the written signal. 4

The disk drive of claim 10 wherein the processor initiates a read/verify after

- 1 23. The method of claim 19 wherein the thermal signal exceeding the
- 2 predetermined threshold indicates a flying height variation that will cause the higher
- 3 frequency components in a signal written to medium to become attenuated resulting in
- 4 unrecoverable errors when reading the written signal.
- 1 24. The method of claim 19 further comprising continuing the write operation
- when the thermal signal does not exceed the predetermined threshold.
- 1 25. The method of claim 19 further comprising initiating a write reassign when a
- thermal signal exceeding the predetermined threshold is detected during the rewrite.
- 1 26. The method of claim 19 further comprising initiating a read/verify after the
- 2 rewrite.
- 1 27. (Currently Amended) An article of manufacture comprising a program
- 2 storage medium readable by a computer, the medium tangibly embodying one or more
- 3 programs of instructions executable by the computer to perform a method for predicting
- 4 write failure resulting from flying height modulation, the method comprising:
- 5 initiating a write operation for writing data to a recording medium;
- 6 monitoring a read channel during the write operation;
- 7 comparing a thermal signal from the read channel to a predetermined threshold; and
- 8 re-writing the data if the thermal signal exceeds the predetermined threshold;
- wherein the thermal signal is a bandpass filtered signal that is tuned to the air bearing
- resonant frequencies associated with a predetermined drive design.

28. (Canceled)

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1 29. The article of manufacture of claim 27 wherein the thermal signal indicates a flying height variation for a transducer.

- The article of manufacture of claim 29 wherein the thermal signal exceeding
- the predetermined threshold indicates a flying height variation that will cause the higher
- 3 frequency components in a signal written to the medium to become attenuated resulting in
- 4 unrecoverable errors when reading the written signal.
- The article of manufacture of claim 27 wherein the thermal signal exceeding
- the predetermined threshold indicates a flying height variation that will cause the higher
- 3 frequency components in a signal written to medium to become attenuated resulting in
- 4 unrecoverable errors when reading the written signal.
- The article of manufacture of claim 27 further comprising continuing the write
- 2 operation when the thermal signal does not exceed the predetermined threshold.
- The article of manufacture of claim 27 further comprising initiating a write
- 2 reassign when a thermal signal exceeding the predetermined threshold is detected during the
- 3 rewrite.
- 1 34. The article of manufacture of claim 27 further comprising initiating a
- 2 read/verify after the rewrite.

| 1 | 35. (Currently Amended) A disk drive, comprising: | | |
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| 2 | processor means for controlling reading and writing of data on a data recording | | |
| 3 | medium; | | |
| 4 | write channel means for processing write signals for recording on the data recording | | |
| 5 | medium; and | | |
| 6 | read channel means for reading data from the data recording medium and for | | |
| 7 | providing a thermal signal representing flying height variation; | | |
| 8 | wherein the processor means compares the thermal signal to a predetermined | | |
| 9 | threshold to determine whether to initiate a re-write operation and wherein the thermal sign | | |
| 10 | is a bandpass filtered signal that is tuned to the air bearing resonant frequencies associated with | | |
| 11 | a predetermined drive design. | | |